ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE

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2012 LOWER COOK INLET PRELIMINARY PINK SALMON FORECAST

Forecast Area: Lower Cook Inlet

Species: Pink Salmon

Preliminary Forecast of the 2012 Run:

	Forecast Estimate (Thousands)	Forecast Range (Thousands)
NATURAL PRODUCTION		
Total Run	622	311–1,075
Escapement	304	102–551
Commercial Harvest	318	209–524

Note: Columns may not total exactly due to rounding to the nearest thousand fish. Commercial Harvest = Total Run - Escapement. Additional harvests may be expected from systems not included in the forecast.

FORECAST METHODS

The forecast of wild pink salmon runs to 9 harvest areas in the Lower Cook Inlet (LCI) Management area was based on a logarithmic regression of total run and escapement from 38 to 46 years of observations. The total run forecast for LCI natural production was the sum of the 9 individual harvest area forecasts. Upper and lower bounds around the total run forecast, however, were derived by multiplying the forecast times the upper and lower values of the percent error ([actual return-forecast return]/actual return) observed during the previous ten years (excluding 2004). Forecasted commercial harvest ranges were obtained by subtracting corresponding escapement goals from the upper and lower bounds of the forecast range. The forecasted aggregate escapement was the sum of mid-points from the individual escapement goals. The total forecasted commercial harvest was the total run minus the aggregated escapement.

FORECAST DISCUSSION

Because pink salmon exhibit a 2-year life cycle, comparisons of run size are typically stratified by odd and even years to account for dominance of one line over the other. In LCI, dominance of one line is typically short lived, lasting 2–6 generations, before the opposing line becomes dominant. Despite the relative parity between odd and even year pink salmon returns in LCI over broad time scales, we continue to stratify run size comparisons by odd and even years to account for the short term dominance cycles.

In 2010, the last even-numbered year, 4 of 9 forecasted systems had runs within the forecast range. The 2012 forecast for natural production of 622,000 pink salmon has a forecast range of 311,000 to 1,075,000 fish. Variable strength parent-year escapements in 2010 and modest return per spawner ratios in recent years suggest there is only a fair likelihood of reaching the point estimate of this forecast range. If realized, a natural run of 622,000 pink salmon would be 26% lower than the mean run size of 841,000 fish for even-year returns between 1962 and 2010. The pink salmon cumulative escapement goal is 337,000 fish (range 124,000–551,000) for systems with a forecast. If the total run comes in as forecasted, the mid-point of the cumulative escapement goal range should be met for all index streams except Port Chatham, Rocky Bay, Bruin Bay River, and Ursus/Rocky Cove, which will fall 8.9, 0.3, 14.5, and 9.4 thousand fish short of their respective goals. The resulting cumulative escapement forecast would then be 304,000 pink salmon.

Four districts make up the LCI management area. The harvestable surplus of naturally produced pink salmon in Southern District is projected to be 62,000 fish, with 40,000 coming from Humpy Creek and the balance from Seldovia and Port Graham bays. Hatchery production of pink salmon in LCI recently resumed after several years of inactivity. Brood stock was taken in 2011 and the first enhanced returns are expected in 2013. Consequently, no supplemental harvest of enhanced pink salmon will occur in 2012.

In Outer District, the number of naturally produced pink salmon available for harvest is projected to be 256,000 fish, with almost 90% (231,000 fish) of the harvest expected to occur in Port Dick Subdistrict. If realized, the Port Dick harvest would be slightly more than the mean even-year catch since 1962. The remainder of the harvest is projected to occur in Windy Bay (25,000 fish), while Port Chatham and Rocky Bays are expected to fall short of their escapement goals.

No pink salmon harvest is expected from Eastern District in 2012. Commercial fishing specifically directed at pink salmon has not been allowed in Eastern District in recent years due to a combination of low production and potential conflicts with the Resurrection Bay Salmon Management Plan (RBSMP), which limits commercial interference with the sport coho salmon fishery.

Poor returns are forecasted for both of the major pink salmon producers in Kamishak Bay District. Escapement shortfalls are expected for Bruin Bay and Ursus and Rocky Cove Subdistricts. Therefore, no commercial harvest of pink salmon is anticipated for Kamishak Bay District in 2012.